

**Category #39:**

Several of the Best Management Cleaning Practices need to be modified

**State Response:**

Cleaning products brought to school without the authorization of the district administration poses potential hazards by circumventing key provisions of the Right-to-Know law, which is intended to protect building occupants from hazardous chemicals. Material Safety Data Sheets (MSDS) must be kept for all hazardous chemicals used or stored in schools; annual training and information about hazardous chemicals must be provided; and procedures must be in place to ensure that hazardous chemical containers are properly labeled and stored.

The intent of an entrance matting system is to remove grit/soil and absorb moisture. Entrance matting systems have been shown to be an effective method of removing up to 80% of dirt on shoes. It is recommend that the mats be at least 15 feet long and equally as wide as the entryway. Matting should be vacuumed daily with strong suction and a beater brush. Vacuums with brushes, beater bars, strong suction, and high efficiency filter bags that can retain dust and particles in the 3 micron size range should be used.

Manufacturer instructions are designed to ensure the proper use of products. Therefore it is vital to only use materials according to the manufacturer's guidelines. The incorrect or misuse of a product may result in a hazardous situation.

Regarding concerns about how the term "HEPA" is used to describe vacuum cleaners, OGS agrees that customers can be easily confused by the varied use by manufacturers of HEPA to describe filter function and entire vacuum systems. OGS reconsidered the best management cleaning practice that encourage schools to investigate a number of new cleaning technologies and removed HEPA-filter vacuums from the list of technologies to investigate. The Guidelines will continue to include the listing of vacuum cleaners certified to the Carpet and Rug Institute (CRI) Green Label standard and users do not need to further investigate the use of HEPA vacuum cleaners. OGS also modified and added to the best practices to address the comment that vacuum cleaners, and particularly their filters, should be maintained properly. Also, vacuuming should be performed everyday in all heavy traffic areas (corridors, entryways, classrooms) and every other day in light to medium traffic areas (media centers, meeting rooms).

**Frequently Asked Public Comment:**

Best Management Practices: (A) No Outside Cleaning Products Brought Into Schools; (B) Entrance Matting Systems (C) Following Manufacturers Instructions (D) Revise Section III (Best Cleaning Management Practices), F, Vacuum Carpets Frequently..... and Use of Bonnet Cleaning (E) Leave Virtually No Residue

--We find that the "Best Cleaning Management Practices" is out of sync in some regards with the rest of the requirements. (Deborah Lema, Research and Education, Racine Industries, Inc.)

--Section III – Best Cleaning Management Practices – subsection D.1 (Purchase Quality Floor Finishes) should incorporate a recommended requirement to use Greenguard Certified Floor Finish Systems when possible. [The Greenguard Environmental Institute has established health and performance based standards to define products with low chemical and particle emissions for use indoors and efficient removal of soil and allergens. The standard establishes certification procedures including test methods for cleaning protocols, allowable emission levels of VOCs and particles, soil and allergen removal efficiency, testing type and frequency, and program application processes and acceptance. Maximum allowable emission levels are those required by the state of Washington's indoor air quality program for new construction, the

U.S. Environmental Protection Agency's procurements specifications, the recommendations from the World Health Organization, and Germany's Blue Angel Program.]

(Ben Taube, Public Affairs Manager, Greenguard Environmental Institute)

--The guidelines do not address cleaning products brought into schools by others.

It is common practice for teachers or staff to bring their own cleaning products into classrooms for personal use or for use by students. There is no provision in the new law which specifically prohibits this practice, and no mention of it in the guidelines.

This practice is widespread and must be addressed. Anecdotal information suggests that virtually every classroom in New York State contains one or more products which would not meet even the minimal criteria currently specified in the guidelines. The situation could be greatly improved by requiring each classroom to be equipped with a spray bottle of the approved general purpose cleaner.

Therefore we recommend that a new category be added to Section III "Best Cleaning Management Practices" as follows:

*Use only products meeting these requirements*

- Each classroom teacher should be provided with a spray bottle of the school's approved general purpose cleaner for occasional cleaning purposes. Notification in writing to all classroom teachers should state that no cleaning products except those provided by the school are permitted for use in classrooms.

(Patricia J. Wood, Executive Director, Grassroots Environmental Education, Port Washington, New York)

43d. On a practical level we recommend that your guidelines include INFORM's "Best Practices Guidelines" fact sheet along with a requirement that classroom teachers be provided with a spray bottle containing an approved bio-based all-purpose cleaner, thereby discouraging the common practice of teachers and staff bringing non conforming cleaning products into the classroom.

(Janet Foley, Director, Occupational Safety and Health, Civil Service Employees Association, CSEA)

--We strongly agree with the use of entrance matting systems as a preventive maintenance measure.

(Deborah Lema, Research and Education, Racince Industries, Inc.)

--We strongly agree with the reminder to follow manufacturers' instructions; WE WOULD LIKE TO ADD A POINT IN THIS SECTION (IIIB) THAT MAINTENANCE OF MACHINES (PART OF MANUFACTURERS' INSTRUCTIONS) SHOULD BE NOTED AS WELL. Not only will a machine function more efficiently and therefore save time, money, energy, etc., but also it could mean a great health improvement. For instance, the US Department of Health and Human Services Centers for Disease Control and Prevention has found that "Cleaning equipment, especially those that engage in wet cleaning and extraction, can become contaminated with waterborne organisms and serve as a reservoir for these organisms... Substantial numbers of bacteria can then be transferred to carpeting during the cleaning process. Therefore, keeping the carpet cleaning equipment in good repair and allowing such equipment to dry between uses is prudent."

(Deborah Lema, Research and Education, Racince Industries, Inc.)

--We strongly agree that carpets should be more regularly vacuumed. Section III (F) is confusing however, as stated below:

(a) Carpet and padding purchasing suggestions are listed under the heading the carpets should be vacuumed before cleaning. Perhaps this section should be retitled something like "Carpet Care". (b) The statement that the "cleaner the carpet, the more sanitary the results" is not clear: perhaps it could read, "pre-vacuuming before performing carpet cleaning is necessary to produce more sanitary results." (c) There are more types of carpet cleaning methods than are listed. Rather than trying to list all of the kinds of cleaning, however, we feel that it would better serve the focus of this document to consider health and environmental factors when choosing a style of cleaning. For example, a more comprehensive Section III F4 with a focus

on environmental benefits might look like:

4. There are many methods of carpet cleaning, with each having positive qualities. Consider these environmental factors in addition to performance and green chemistry as defined by Green Seal when choosing a method or combination of methods:

4.1. Energy Savings:

(a) Some methods dry quickly enough that air movers, dehumidifiers, and HVAC systems are unnecessary to aid in drying the carpets and therefore represent a significant energy use reduction. (b) Some cleaning methods do not require heating of the cleaning solution in order to obtain good cleaning results.

4.2. Drying Time: The US Department of the Interior says, "...the residual moisture left after the shampoo process when using water or steam negatively impacts indoor-air quality." "While it is a general rule to dry carpet in less than 24 hours to reduce the chance for mold growth, optimal drying time is less than 4 hours," says the National Institute of Building Sciences.

4.3. Water Savings: Some methods use less water than others and therefore represent a significant water use reduction. Further, using less water reduces drying time without the need of extra drying equipment that costs time and energy.

4.4. Biobased Content: Some cleaning systems use Biobased ingredients, the use of which supports the intent of the Farm Security and Rural Investment Act (FSRIA, or the Farm Bill of 2002). (Deborah Lema, Research and Education, Racine Industries, Inc.)

--Wondering where a low-moisture carpet cleaning system such as Host ([www.hostcarpetcleaning.com](http://www.hostcarpetcleaning.com)) will fit into the Proposed guidelines.

This system certainly seems to address many of the items listed under the best cleaning management practices section, however doesn't seem to fit with either the bonnet surface cleaning and pressure injecting (which I am assuming refers to water extraction?) methods referred to in the proposed guidelines. (Jeff Leland, President, Leland Paper Company, Inc., Glens Falls, NY)

--In section 3.F.4.a the document mentions the use of bonnet cleaning. This is generally discouraged by almost all carpet manufacturers.

(Ted Hershey, Product Manager, Nilfisk-Advance, Inc.)

--Section F, "Vacuum Carpets Frequently Prior to Considering the Use of any Carpet Cleaning Products", Best Cleaning Management Practices:

2. The cleaner the carpet, the more sanitary the results.

Response to 2.: The results of what? Rolling around on it? Eating off it? Do you mean to say, Clean carpets are sanitary carpets? Why bother with something so obvious?

Also, Consider the following revisions to the text in Section F.4.:

4. Carpet cleaning detergents must penetrate through the soil and [surround]the fibers to [allow for] soil [suspension]. There are two types of [approved] carpet cleaning: {If you want to disallow several other types of interim cleaning, such as encapsulation, dry foam, dry powder (absorbent compound.) These are, however, recognized in VI. C. [Interim] Cleaning – Bonnet Sprayed on with either a very low-diluted (as compared to Deep Cleaning dilution rate) carpet pre-treat chemical {I have used bonnet sprays with 4 to 1 ratios and rotary shampoo solutions of 30 to 1. Why specify this? It doesn't matter to the outcome what the dilution ratio is.} dilution or a general purpose detergent diluted as for wet mopping {Why would you use a floor mopping detergent on carpets?} Follow manufacturer's directions on the use of bonnet. {As with all products.} b. Deep Cleaning Use products [designed for use] with pressure-[injection] and extraction machine[s] on [heavily] or deeply soiled carpets. Rotary machine brush shampooing may be performed after pre-treating and before [rinse] extraction. (Use of [hot] water for the [rinse]extraction process is recommended for the same reasons as with floor care – [hot] water [is more efficient in residue removal from the] carpet fibers.)

No study comes to mind that shows "cold water pulls the soil away from the carpet fibers." This is a misconception. All water, cold or hot will cause soil to move away from a surface once defloculation (soil

separation) has occurred by use of a detergent. Due to surface tension, water by itself penetrates soils poorly, hence the addition of surfactants to detergents. Although heating water does decrease the surface tension, the four fundamentals of soil suspension remain: time (dwell), agitation, chemical action, temperature. Without these four, the cleaning will not be as effective and its contribution to a healthy environment will be lessened.

(Mr. Lynn E. Krafft: Has been in the building services contracting field in Watertown, NY for over 30 years. He is IICRC certified in carpet cleaning and a couple of other areas. He does editing for the Ask the Experts column featured on CMMonline as a part of the (ICAN) International Custodial Advisors Network's contribution to the cleaning industry.)

--Section I, "Leave Virtually No Residue", Best Cleaning Management Practices:

Consider also rewording Section I.1.:

I. Leave virtually no residue [on a cleaned surface.]

1. Always dry clean (without solvents) before wet cleaning (using solvents).

[Ideally,] wet cleaning products should leave no residue [on the surfaces being cleaned. This means they should work with a minimum of suds or foam. Once loosened, soils must be either wiped, vacuumed, or rinsed from the surface. In wet cleaning, wiping, vacuuming, or rinsing is always necessary to avoid residue build-up.] Detergents that leave a considerable residue are unsanitary and force the need for [extensive wiping or rinsing, which] wastes time and water resources.

In wet cleaning, the soil is first suspended and then must be removed from the surface somehow. Take your pick, but the second step of removal (after the suspension) cannot be eliminated to save time, money, water, cloths, whatever. If you skip it, you will have residue, which is defined as that which resides or remains on a surface because it was not removed even after being freed from the surface.

Dry cleaning requires only one step because the soil (dust or grit, for example) are not bonded to the surface.

Wet cleaning always has two steps, breaking the bond and removing the soil. The second step cannot be eliminated because someone dislikes it!

(Mr. Lynn E. Krafft: Has been in the building services contracting field in Watertown, NY for over 30 years. He is IICRC certified in carpet cleaning and a couple of other areas. He does editing for the Ask the Experts column featured on CMMonline as a part of the (ICAN) International Custodial Advisors Network's contribution to the cleaning industry.)

--By the way, there are FIVE methods of carpet cleaning, not TWO, as your guidelines state. It's your money and your state, so you can do what you want. I am in Kansas and have nothing to lose. Just trying to do you a favor! (Mike Brummett, BASIC Carpet Care, Kansas)

--Item III, sub-item 1. There is no indication how a product will be defined as leaving a residual (from detergent) vs. a product that cleans and leaves a residual (from soil overload). Soil removal is a function of contact time, temperature, and training (procedures). Soil itself is a function of many things, including soil type (i.e. glass cleaning, you can have make-up, deodorant, sebum-soil, hair spray, etc.). If there is no identified procedure to gauge residual, this will open up a can of worms among suppliers bidding on the business. (Chuck Hodge, Scientist, Ecolab Inc., Eagan, Minnesota)

--I believe the document needs more fine tuning especially with some of the equipment requirements and in its discussions about carpet care and the issues associated with the use of hot versus cold water. (Professor Stephen Ashkin. President of The Ashkin Group, LLC.)

--III. Best Cleaning Management Practices: (Suggested Changes/Modifications)

If the Green Seal proposed standards for cleaning services are adopted, this entire section III should be replaced with the relevant sections of the Green Seal standard.

A. Add specific recommendations for matting – suggest using Section 5.3.2 from the Green Seal

proposed “Environmental Standard for Cleaning Services”.

F. Add that “Use of HEPA filtered vacuum cleaners is strongly suggested.” Although HEPA vacuums are mentioned in the next section, it is appropriate to first state here.

G. Change heading to: “Use New Cleaning Technologies”

1. Change the end of the last sentence to read “... and other advances in cleaning equipment is strongly suggested.”

Add a new 2. and renumber the section: “ 2. Use stream type pump bottles to apply cleaning products. This will minimize aerosolizing of the products and reduce occupant irritation.”

Add section:

“J. Use of Outside Products

1. This guideline would prohibit any person from bringing in cleaning or deodorizing products that do not comply with Section II. It is suggested that districts provide non-custodial staff with access to approved products to avoid problems.”

(Katherine Kelleher of (NYSUT) NYS United Teachers)

--The Best Cleaning Management Practices (Section III) are generally a good and essential component of an environmentally healthy school cleaning program. We urge that this entire section be advised by the emerging Green Seal standard for cleaning services. Once finalized, the Green Seal standard could serve as the basis for Section III and it should then be revised accordingly.

Under paragraph C of Section III concerning disinfection, the proposal states “sanitize only when and where necessary.” The phrases “where necessary” and “if needed” are not linked to a determinative authority, therefore leading us to question, “if necessary or determined by whom?” We strongly agree with the general recommendations to minimize the use of disinfectants and sanitizers, to minimize disinfection in a school environment, and that good and adequate cleaning without disinfection is in most cases adequate and appropriate. We recommend that this section be amended and strengthened to recommend that disinfectants and sanitizers not be used unless otherwise required by law.

Some concern has also been raised that these best cleaning management practices may need to be adjusted to better suit the specific needs of very diverse school facilities in New York State. Overall, we recognize that these recommended practices are not mandatory, and therefore a good and necessary forward step that should be revisited at least annually, as is required with the procurement guidelines.

Section G of the draft guidelines should be entitled, “Use New Cleaning Technologies” not “Investigate the Use of...” as currently stated so as to better reinforce the importance of their use. We also ask that the same section G 1. be changed at the end to say that “...and other advances in cleaning equipment is strongly suggested”

Finally, we note that many in school communities have raised concern that teachers and other school personnel may unknowingly undermine the intent of a school facility’s green cleaning program by bringing their own personal cleaning products to the school. Healthy Schools Network has previously addressed this concern in the HSN Healthier Cleaning and Maintenance Practices Guide. We agree with the comments from the New York State United Teachers, which urges adding a new section to Section III

“J. Use of Outside Products

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(Stephen J. Boese, New York State Director, Healthy Schools Network, American Academy of Pediatrics, Dist. II, American Lung Association of NYC, American Lung Association of NYS, The Association of New York City Education Councils, Campaign for Healthy Children, Citizens Environmental Coalition, Citizens For A Clean Environment, Community Health and Environment Coalition, Environmental Advocates of NY, For a Better Bronx, Grassroots Environmental Education, INFORM, Inc., Learning Disabilities Association of NYS, Learning Disabilities Association WNY, National Resources Defense Council, NEA of New York, New York Committee for Occupational Health and Safety, Toxic Waste Lupus Coalition, WEACT for Environmental Justice, Wellness in the Schools Inc., Jacquelyn Kamin, Community Affairs

Director of Opportunity Charter School, Philip J. Landrigan, MD, MSc, Professor and Chairman of Department of Community & Preventive Medicine Mount Sinai School of Medicine, Connecticut Foundation for Environmentally Safe Schools, Health Schools Campaign, Chicago IL, Healthy Children Organizing Project, San Francisco, Ca., and NEA Healthy Schools Caucus)

--Best Cleaning Practices (based on Best Cleaning Management Practices)

As a general comment, we recommend that you consult the Collaborative for High Performance Schools (CHPS) *Best Practices Manual* Section IV, "Maintenance and Operations." The manual contains some of the additional best practices that would be important for schools to use in addition to those you have already compiled. For example, the manual encourages the school to formalize a plan for the cleaning operation, which in the case of green cleaners would include a systematic look at all the cleaning needs as well as the chemicals, equipment and practices used to address them. The *Best Practices Manual* Section IV is available at [http://www.chps.net/manual/documents/BPM\\_2006\\_Edition/CHPS\\_IV\\_2004.pdf](http://www.chps.net/manual/documents/BPM_2006_Edition/CHPS_IV_2004.pdf)

We would also make the following comments on the current text:

- C. Germicides – The primary reason for cleaning first and disinfecting after is that you need a clean surface for the disinfectant to work. In addition, you should advise staff to be cognizant of the disinfectant's "kill time," which may mean that they would have to leave the disinfectant on the surface for a few minutes, concentrate on other cleaning tasks and then return to remove the disinfectant. Products claiming to be a disinfectant or a sanitizer must be registered with the U.S. Environmental Protection Agency under FIFRA in addition to the NY DEC. (You mention it in other sections, but not here).
- H. Training – Consider strengthening this language somewhat to state: Training needs to involve suppliers and manufacturers in order to demonstrate the proper use of a product and provide direct answers to questions of product performance and cleaning practices. Such training shall also include a periodic monitoring of those cleaning practices to ensure that new personnel are properly trained.

(Marcia Deegler, Operational Services Division, Environmental Purchasing Program Manager and Dmitriy Nikolayev, Operational Services Division, Deputy Procurement Team Leader, Facilities)

--Best Cleaning Management Practices

On page 7, paragraph C, reference is made to germicides in the title of this section. We recommend that the reference be changed from "germicide" to "disinfectant" which is a more commonly used expression.

Also in reference to paragraph C on page 7, number 3: we recommend that in addition to the statement that disinfectants must be registered by the NYS Department of Environmental Conservation, that reference also be made to the need for registration by the U.S. Environmental Protection Agency.

In regard to paragraph C, page 7, number 4: We recommend that you insert the words "or sanitizer" immediately after the word "disinfectant".

(Bill Balek, Director of Legislative Affairs, ISSA, Lincolnwood, IL)

--BEST MANAGEMENT PRACTICES

Recommended Change: This section provides some good, basic information on subjects that are quite complicated and may open the State up for criticism for not going far enough in defining best practices. SBGA recommends that OGS work with Green Seal, Inc. to further define these practices. OGS could use its web site to further define and showcase best practices in greater detail for the state's public and nonpublic schools to reference as a resource.

D. Purchase of Quality Floor Finishes

Recommended Change: 1. A quality floor finish must handle wear and tear, require minimal burnishing, and not powder. ~~easily and last without stripping for at least 3 years. Floors in some schools~~

~~have reached 5-10 or more years without needing to be stripped.~~

Justification: Our review team (which comprised over 130 years of experience) was not able to identify a school district that could realistically meet this best practice. Daily student traffic and allowable staff levels make meeting this standard nearly impossible for many schools.

Recommended Change: 2. A quality floor finish results in the easier removal of soil by dust mopping, followed by ~~use of~~ spot mopping with a quality cleaner on a daily basis to remove any remaining soil without leaving left behind soil or chemical residue. This minimizes the proliferation of dust, dirt, germs, ~~molds,~~ and other particulate matter that gets caught in poor quality flooring. Eventually, this type of residue often circulates throughout a school heating, ventilation, and air conditioning (HVAC) system, causing potential asthmatic and other health concerns for children.

Justification: Mold is not associated with a quality floor finish. Mold needs air, moisture and a food source to grow.

#### I. Leave Virtually No residue

1. Cleaning products should virtually leave no soil residue when used on a daily basis and therefore will not require a rinse step. Detergents that leave a considerable residue are unsanitary or force the need for an additional step of a fresh water rinse. A second step wastes time and water resources.

NOTE: *When disinfectants and sanitizers are added to this program, residue WILL be left to sanitize*

Recommendation: ADD a New Section "J" to Read as Follows:

#### J. Use of Cleaning Products

"Teachers and administrators will have access to Green Seal Certified products used by the school district for routine cleaning needs in the classroom and in administrative offices."

Justification: Consistency in the use of Green Seal Certified cleaning products throughout the school district will encourage best practices, eliminate the use of harmful outside cleaning products and raise awareness district wide.

(Signed By: David Brooks (Malone CSD), President & Frederick Koelbel (West Islip UFSD), 1<sup>st</sup> Vice President, Legislative Committee Chairman)(Submitted By: Kathleen Van De Loo, Executive Director, (NYS SBGA) NYS Association for Superintendents of School Buildings and Grounds, Inc., Albany, NY)

--Section III (F) Vacuum Carpets Frequently. Major carpet manufacturers, fiber producers, and stain resist chemical manufacturers highly recommend daily vacuuming of main traffic areas to enhance appearance, extend life, and maintain adequate indoor environmental quality.

(Carey Vermeulen, President, Institute of Inspection, Cleaning, and Restoration Certification, (IICRC) Institute Of Inspection, Cleaning And Restoration Certification, Vancouver, WA)

#### --Appendix A – Suggested Revised Text to BEST CLEANING MANAGEMENT PRACTICES

##### C. Clean first, then ~~only~~ use a germicide if needed.

1. First and foremost, a residue-free, microbially-safe and clean surface is a top priority.
2. The safe and effective use of disinfectants and sanitizers is an effective means of protecting students from disease-causing microorganisms. Clean first, then disinfect or sanitize ~~only~~ when and where ~~[necessary]~~ microbial contaminants are potentially present on surfaces. Surfaces must be cleaned thoroughly, whether or not disinfectants are used.
3. If any product claims to be a disinfectant or sanitizer, then IT MUST BE REGISTERED BY Department of Environmental Conservation as an approved antimicrobial product. OGS will require the manufacturer to submit the "Certificate of Pesticide Registration" for any product that claims to be a sanitizer or disinfectant in order to be listed or included on contract by OGS. Consumers can also check the joint Cornell-DEC website listing of registered pesticides to confirm registration of specific products at <http://pmep.cce.cornell.edu/pims/>.
4. ~~[If a school decides to use a disinfectant]~~ When and where use of a disinfectant is

appropriate, it is essential that specific procedures, label directions and training be followed prior to its application.

(Submitted by Geoff Hall, State and Local Affairs Manager, Northeast Region, American Chemistry Council, Albany, NY on behalf of Stephen Rosario, Executive Director, NYS Chemical Alliance and William F. Carroll, Ph.D, Acting Managing Director, Chlorine Chemistry Council)

--Carpet Cleaning. If the desire to maintain carpets in a manner that minimizes the exposure to children of the accumulated contaminants then surface appearance procedures that simply give the illusion of soil removal by maintaining a consistent appearance on the carpet surface should be prohibited.

Recommendation. Stress thorough and frequent dry vacuuming not interim cleaning methods that do not flush soils from the carpet such as bonnet cleaning, dry or foam shampooing or powder cleaning systems. The term carpet appearance management usually means maintaining the carpet surface appearance and not the removal of soils below the surface. Insist on an excellent dry vacuuming program, carpet spotting and extraction process and most preferably application of a prespray solution or scrubbing of the carpet with brush followed by rinse extraction with water only to remove soil and cleaning chemicals.

(Michael Rochon, Cogent Environmental Solutions, Caledon, ON, L0N 1C0)

--Leave Virtually No Residue. The statement is well intentioned but does not serve the needs of children or even cleaning best practices. When a cleaning system does not include a rinse step you encourage spreading soil contaminants, bacteria and viruses as well as organic deposits. In addition the lower levels of cleaning detergent will be left on surfaces cleaned. What assurance is there that these trace amounts of detergent residues will not be absorbed by children touching surfaces cleaned? I have seen no data reporting the lack of absorption of cleaning detergent residues. In fact quite the opposite - recently there have been numerous publications reporting on the amount of chemicals in the blood and urine samples of many volunteers. A report by the Centers for Disease Control in Atlanta report disinfectant chemical residues in the general population. Surfactants, the main ingredient in cleaning products, are used to improve the skin absorption of many topical medications.

Recommendation. All cleaning activities using cleaning chemicals should use a technique of application from a flip top or spray bottle applied to surface and removed and or rinsed with clear water. (Michael Rochon, Cogent Environmental Solutions, Caledon, ON, L0N 1C0)

### --Section III. Best Cleaning Management Practices (pages 6-9)

Item A: Matting systems are only effective if they are cleaned and maintained on a regular basis. This should be added in this section.

Item B: Using excess product may or may not produce a residue.

Item C: There are dual purpose products that both clean and disinfect. It would in fact decrease chemical usage to use these products when appropriate.

Item D, paragraph 1 and 2: Purchase quality floor finishes. The requirement that a floor finish last without stripping for at least 3 years is inappropriate. The industry norm is to strip and reapply floor finish one time/year. Floor finishes yellow, develop scratches and wear away. If the requirement is for three years wear, users will top scrub the finish and recoat, as it is important for a floor finish to be a smooth surface, which promotes ease of cleaning.

Item D, paragraph 3: Mopping detergents must be cold water formulated, free-rinsing, and leave virtually no soil or chemical residue after use. This restriction is not consistent with the mopping task. A mop goes back to the bucket over and over again to be laundered as it works. Hot water does a better job of soil release and leaves the mop cleaner, faster.

Item E. Use cold water. The restriction for cold water cleaning with general purpose cleaners, carpet cleaners and bathroom cleaners is not consistent with scientific evidence of the benefits of temperature and the efficiency of chemicals. Time, agitation, chemical, and temperature (TACT) are the basic elements of soil removal. When you give up temperature to save energy you have to increase the amount of water and

chemicals used, providing less efficient cleaning and promotes left behind soil and chemical residue. Furthermore, not all Green Seal standards require cold water dilution.

Item F, paragraph 4: Use of cold water for the injection/extraction process is recommended for the same reasons as with floor care - cold water pulls the soil away from the carpet fibers. Soils are already clinging to the colder surface that is being cleaned. It is with temperature and chemicals that soils are loosened and spread such that they can be removed from the surface. We are not aware of any study that proved that "cold water pulls the soil away from carpet fibers". And proper rinsing with hot water should always be required to facilitate the soil and detergent residue removal.

(Martha R. Macy-Ruhe, Product Safety & Regulatory Affairs, P&G Household Care, The Proctor & Gamble Company, Cincinnati, OH)

--Specifically regarding Section III "Best Cleaning Management Practices", subsection letter "G", number 1. This referenced section suggests the investigation of new cleaning technologies, such as HEPA filter vacuum cleaners. In the spirit of why this Executive Order is being drafted and being sensitive to budgetary needs and constraints, there are some articles and information that I would like to pass along regarding HEPA filtration and HEPA vacuums. (1) With most vacuum manufacturers advertising the word HEPA on their product, it can be confusing for the consumer to know what the manufacturer is really offering and what the filtration really is accomplishing. One major difference among HEPA products is the distinction between what has a HEPA filter and what is a HEPA certified system. A HEPA certified system typically meets a certain set of criteria to be operated in different levels of clean rooms or some type of hazardous cleanup and is a sealed system. A vacuum that is designated to have a HEPA filter only does not have to meet these requirements. (2) Another point to address when selecting a vacuum that has a HEPA filter is the cleaning ability of the vacuum in general. If the overall performance of the vacuum is inferior the particles that need to be captured will never get out of the carpet and into the vacuum. Other considerations is how often the HEPA filter would need to be changed, the cost of the filter, and any back pressure the HEPA filter may cause to the performance of the vacuum. Also, there are many viable products on the market that do not have a HEPA filter that will improve indoor air quality and the cleanliness of your buildings. Lastly, no matter what vacuum is purchased without good filter maintenance no vacuum will perform at the level intended.

[An article was attached but it is too long to be included.]

(Stephanie Standley, Director of Education, ProTeam, Inc.)